REMARKS

Claims 1 and 11 are pending in the application. Claims 2-10, and 12-20 have been withdrawn from consideration. The specification has been amended to correct the priority claim. It is believed that no new matter is added by this amendment.

Objection

The specification is objected to under 37 C.F.R 1.821 for the recitation of "CYGG" on page 28, line 27 and page 29, line 9 and the recitation of "LXXC" on page 49, line 29 and page 51, line 18. In particular, the Examiner asserts that the identified sequences must be identified by a SEQ ID Number as set forth in 37 C.F.R. 1.821(a)(1) and (a)(2). Applicants submit with this response a substitute paper and computer readable form of the sequence listing as required under 37 C.F.R. 1.821. The paper copy and the computer readable form of the sequence listing are the same and contain no new matter. Applicants believe this objection has been overcome and respectfully request its withdrawal.

Objection Under 35 U.S.C. § 132

The specification is objected to under 35 U.S.C. § 132 for the recitation of "which is incorporated herein by reference in its entirety" on page 1, between lines 1 and 3. In particular, the Examiner states that the amendment of 09/30/03 which added the priority claim to the specification improperly added new matter through the inclusion of the phrase "which is incorporated herein by reference in its entirety." Applicants have amended the specification to remove the new matter. Applicants believe this objection has been overcome and respectfully request its withdrawal.

Rejection Under 35 U.S.C. § 103

1. Claim 1 is rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Sampson et al., U.S. Patent No. 6,217,884 in view of Tam (*In: Peptide Antigens: A practical Approach* (Ed) Wisdom G.B. IRL Press, Oxford University Press, New York, 1993, p83-90) or Huang et al. (*Mol. Immunol.* 31:1191-1199, 1994) and Harlow et al. (*In: Antibodies: A Laboratory Manual.* Cold Spring Harbor Laboratory, Chapter 5, p. 76, 1988).

Applicants respectfully traverse this rejection. Applicants point out that the present application has a priority date of March 2, 1998. Sampson et al. has a filing date of December 28, 1998. Thus, the Sampson patent which was filed on December 28, 2003 is an improper reference. Neither Tam nor Huang et al., nor Harlow et al., alone or in combination teach or suggest all the limitations of the claims. Therefore, applciants request withdrawal of the rejection, as the remaining cited references fail to teach or suggest each element of the claimed invention.

2. Claim 1 is rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Nuijens et al., WO 9117258 in view of Tam (*In: Peptide Antigens: A practical Approach* (Ed) Wisdom G.B. IRL Press, Oxford University Press, New York, 1993, p83-90) or Huang et al. (*Mol. Immunol.* 31:1191-1199, 1994) and Harlow et al. (*In: Antibodies: A Laboratory Manual.* Cold Spring Harbor Laboratory, Chapter 5, p. 76, 1988).

Applicants respectfully traverse this rejection. The Examiner has attempted to equate the disclosure of a larger sequence in Nuijens et al. which include SYQHDL as a disclosure of SEQ ID NO: 10. Applicants point out that what the Examiner is doing is the equivalent of using the disclosure of the entire human genome to argue that a specific small peptide which exists therein is obvious. In fact what is disclosed in Nuijens et al. is a larger peptide specific for Factor XII, a totally unrelated peptide from a totally unrelated organism. Thus, the Examiner is arguing that there is some suggestion to modify the peptide disclosed in Nuijens et al. to arrive at SEQ ID

NO: 10 without stating any putative motivation to do so. Furthermore, on page 14, lines 9-15, Nuijens et al. disclose that the peptides disclosed therein are the preferred peptides. There is no suggestion in Nuijens et al. that any modifications could be made that would improve the invention disclosed therein. Additionally, there is no suggestion in either Tam or Huang et al., that the proposed modification would improve the peptide immunogens of Nuijens et al.

There is no suggestion anywhere in the combination cited to look to Nuijens et al. to prepare *Streptococcus pneumoniae* peptide of any kind. The possibility that one would look to Nuijens et al. for the design of a *Streptococcus pneumoniae* peptide is so minute, it defies recognition. The proteins are so different, there is no basis for similarity of structure or function. Thus there is no basis to believe that one of skill in art of *Streptococcus pneumoniae* field would have given the slightest glance to Nuijens et al. Therefore the combination of references fails to meet the basic requirements for a showing of obviousness.

Moreover, if the peptide of Nuijens et al. is modified, the modification could render the peptide unsatisfactory for any use taught or suggested in Nuijens et al., that is, as a target for binding an antibody against the larger peptide. This is inadequate basis for an obviousness rejection. Specifically, as noted in the MPEP 2143.01 "If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2. 900, 221 USPQ 1125 (Fed. Cir. 1984)." As antibodies bind tertiary structures, removing peptides from a sequence could effectively change the folding pattern and thus the target for the antibody. There is no indication that the smaller peptide (i.e., SEQ ID NO: 10) would be suitable as a target for an antibody as proposed by Nuijens et al. Thus, such a modification is not suggested by any motivation in Nuijens et al. or the combination with unrelated art. Moreover, there is no suggestion anywhere in any of the cited art that the peptides of Nuijens et al. could be improved by truncating the peptides and then modifying the peptide to become a multiple antigen peptide. Thus, the combination does not render obvious the multiple antigenic peptide of claim 1. Additionally, the present claims specifically recite that the peptide "immunospecifically binds to

a monoclonal antibody obtained in response to immunizing an animal with *Streptococcus pneumoniae* pneumococcal surface adhesion A protein (PsaA)." A peptide that specifically binds an antibody for Factor XII and also happens to bind PsaA to some degree, is not a peptide that immunospecifically binds to PsaA. Furthermore, as discussed above, neither Tam nor Huang et al., nor Harlow et al., alone or in combination teach or suggest all the limitations of the claims. Applicants believe the rejection to be overcome and respectfully request its withdrawal.

Furthermore, the peptides of Nuijens et al. are not analogous art with the peptides disclosed in the present application. Specifically, one of skill in the art of *Streptococcus pneumoniae* would not be one of skill in the art of Factor XII, a clotting factor in humans. The Examiner is attempting to equate the two different art because both involve peptides. However, this is equivalent to stating that all art involving peptides is the same. As stated in the MPEP 2145, "a prior art reference is analogous if the reference is in the field of the applicant's endeavor or, if not, the reference is reasonably pertinent to the particular problem with which the endeavor was concerned." *In re Oetiker* 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir 1992). Surely the Examiner is not attempting to say that because one is of skill in the art of art of protecting against pneumococcal infections, one is skilled in the art of human blood clotting. Applicants fail to see how art relating to Factor XII could possibly be considered within the field of the endeavor of the present claims or pertinent to the problem of pneumococcal infections. As the art is not analogous to the present claims, applicants believe that the rejection is improper and respectfully request its withdrawal.

Applicants acknowledge that claim 11 is only objected to with regard to its dependency on a rejected claim and is otherwise allowable.

Pursuant to the above remarks, reconsideration and allowance of the pending application is believed to be warranted. The Examiner is invited and encouraged to directly contact the undersigned if such contact may enhance the efficient prosecution of the application to issue.

No fee is believed to be due at this time; however, the Commissioner is hereby authorized to charge any additional amount or credit any overpayment to Deposit Account No. 14-0629.

Respectfully submitted,

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Gwendolyn D. Spratt — Date: 3-11-04